

Save Our Water Supply: AVOID RUNOFF

Maintaining a safe, clean water supply is important for everyone's health. From farmers who need clean water to grow food to animals who need safe water to drink and live in, keeping our water unpolluted is vital to the Valley. That's why our storm water runoff needs to stay clean.

What is runoff?

When raindrops splash onto the street and flow down the gutter, the water ends up in storm drains. This rainwater picks up contaminants along the way and carries them to ponding basins, canals, creeks or the San Joaquin River. The water can pick up motor oil, bug killers and trash, which end up seeping into our groundwater — and groundwater is our drinking water.



Irrigation runoff is wasted water.

When the water from our irrigation systems runs off the soil or gets sprayed onto paved areas, it washes contaminants off plants and paved areas into our storm drains. Contaminants such as fertilizers, insecticides, weed killers, oils and grease can get carried into our storm drain system and may end up in our drinking water. By eliminating irrigation runoff, we reduce the risk of contaminating our water which can lead to costly water supply cleanup. You can also protect our groundwater by using fewer pesticides and avoiding toxic products.

FOLLOW THE OUTDOOR WATERING SCHEDULE

The outdoor watering schedule is subject to change seasonally and during times of water shortage. For the current City of Fresno schedule, visit www.fresnowater.org. To report water waste, or learn about our free landscape consultation services, call Water Conservation at 621-5480. You can also email us at waterconservation@fresno.gov.

The City of Fresno thanks you for your cooperation in helping protect our community.

Tips For Avoiding Irrigation Runoff

Anyone who has ever seen a landscape being watered to the point where the water puddles and either runs down the sidewalk, into the gutter, or onto the street has witnessed "irrigation runoff." Runoff is often caused by sprinklers spraying onto paved areas and/or by running the irrigation system for too long of a cycle. Monitor the spray pattern of sprinklers and install nozzles that are appropriate for the area. Then determine how long to run your irrigation cycle by doing the following:

Step One: Detect the runoff point

Use a watch to determine the amount of time it takes to reach the runoff point from your irrigation system. Observe the beginning time on the watch; start your sprinklers and observe the irrigation until you see water accumulating (puddling) and/or running onto the sidewalks or gutters; again observe your watch. The runoff point is the length of time between when you first observed runoff and the beginning time. To prevent runoff do not exceed this short length of time during any one irrigation cycle.

Step Two: Set your controller to water cycle

Use the features on your sprinkler controller to your advantage. For example, if your landscape requires 12 minutes of irrigation and your runoff point is four minutes, then set three start times of four minutes each no more than two hours apart. Using short cycles not only stops runoff but allows time for the soil to absorb the water between applications.

Adjust your controller every month to allow for season changes. In the winter months, turn your controller to the "off" position and/or reduce the amount of irrigation. To help with water pressure set your controller start time(s) at odd times, such as 9:37 p.m. or 3:42 a.m., if your controller features allow you to do so.

Step Three: Replace old or broken equipment

It's easier to avoid runoff in your garden when you have the proper equipment in working order. Many irrigation manufacturers make low-flow pop-up sprinklers. These sprinklers spray larger droplets, reduce precipitation rates and regulate water pressure. Simply check your local irrigation supplier to discuss these sprinkler features.

Spray nozzles come in 1/4, 1/3, 1/2, 3/4 or full circles. Make sure that all of your spray nozzles are at the proper angle for the area that you're watering. Adjustable arc spray nozzles are also available for odd-shaped areas.

Water-Wise GARDENING TIPS

Here are some ways to have a healthy garden while conserving water:

- Choose plants classified by water needs of very low, low and medium that are appropriate for the Central Valley.
- Aerate lawns that are on compacted or heavy clay soils to increase water penetration into the soil and to reduce runoff.
- Mulch all flower beds with up to 4 inches of organic (bark, wood chips, newspaper, straw) or inorganic (gravel, pavers, plastic, shredded tires) material to reduce evaporation, moderate soil temperature and suppress weeds.
- Plants with similar water needs should be planted together.
- Adjust your irrigation controller to allow for weather conditions, plant needs and soil conditions.
- Consider drip irrigation — the most efficient method of irrigation. It's easy to install, whether converting a sprinkler system or starting from scratch.
- Reduce lawn size or eliminate unused lawn areas. Consider replacing them with low water-use ground cover plants or decorative mulch.
- Mow lawn higher during summer months to reduce plant water needs, reduce water evaporation from the soil surface, and suppress weeds.
- Apply only slow-release fertilizers that stay available to the plant for longer periods of time and do not encourage succulent, water-hungry growth.
- Periodically manually turn on your irrigation system to check for leaks and broken equipment, then make repairs.
- When checking the system, monitor the spray pattern of sprinklers and install nozzles that are appropriate for irrigated areas to avoid spraying water on paved surfaces.
- Sweep sidewalks and patios instead of hosing them off.



For more information contact:

UC Cooperative Extension Master Gardeners
at (559) 456-7563 or <http://mgfresno.ucdavis.edu>,
or the City of Fresno Water Conservation Program
at (559) 621-5480 or www.fresnowater.org.

To dispose of unused pesticides and other household hazardous waste, call the County of Fresno at (559) 262-4259 for a drop-off site near you.

For current watering schedule or to report water waste, visit www.fresnowater.org or call (559) 621-5480.

For Spanish or Hmong translation, please call (559) 621-5480.



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CREATING A FRESNO-FRIENDLY GARDEN

PLANT CHOICES & WATER CONSERVATION TIPS *for our climate*



PLANT GUIDE

For Low Water-Use Species

The plants listed in this brochure are water-wise, which means they require a minimal amount of water to thrive in the Central Valley as classified by Sunset's Garden Climate Zone 8 or 9. Because plants have many common names, the botanical names are also listed. For more information on each plant, you may consult the *Sunset Western Garden Book* or other reliable sources.

ZONE 8

Cold-air Basins of California's Central Valley

Growing Season: Mid-February through November. This is a valley floor with no maritime influence. Summers are hot; winter lows range from 29° to 13° F / -2° to -11° C. Rain comes in the cooler months.

ZONE 9

Thermal Belts of California's Central Valley

Growing Season: Late February through December. Zone 9 is located in the higher elevations around Zone 8, but its summers are just as hot; its winter lows are slightly higher (temperatures range from 28° to 18° F / -2° to -8° C.) Rainfall pattern is the same as in Zone 8.



TREES

COMMON NAME	Botanical Name
<input type="checkbox"/> Acacia	<i>Acacia</i> spp.
<input type="checkbox"/> African Sumac	<i>Rhus lancea</i>
<input type="checkbox"/> Arizona Cypress	<i>Cupressus arizonica</i>
<input type="checkbox"/> Australian Willow	<i>Geijera parviflora</i>
<input type="checkbox"/> Beefwood	<i>Casuarina</i> spp.
<input type="checkbox"/> Bottlebrush	<i>Callistemon</i> spp.
<input type="checkbox"/> Bottle Tree	<i>Brachychiton populneus</i>
<input type="checkbox"/> California Buckeye	<i>Aesculus californica</i>
<input type="checkbox"/> Carob	<i>Ceratonia siliqua</i>
<input type="checkbox"/> Chaste Tree	<i>Vitex agnus-castus</i>
<input type="checkbox"/> Chinese Pistache	<i>Pistacia chinensis</i>
<input type="checkbox"/> Chitalpa	<i>Chitalpa tashkentensis</i>
<input type="checkbox"/> Crape Myrtle	<i>Lagerstroemia indica</i>
<input type="checkbox"/> Deodar Cedar	<i>Cedrus deodara</i>
<input type="checkbox"/> Desert Willow	<i>Chilopsis linearis</i>
<input type="checkbox"/> Eucalyptus	<i>Eucalyptus</i> spp.
<input type="checkbox"/> Fruitless Olive	<i>Olea europaea</i>
<input type="checkbox"/> Goldenrain Tree	<i>Koelreuteria paniculata</i>
<input type="checkbox"/> Incense Cedar	<i>Calocedrus decurrens</i>
<input type="checkbox"/> Japanese Pagoda Tree	<i>Sophora japonica</i>
<input type="checkbox"/> Maidenhair Tree	<i>Ginkgo biloba</i>
<input type="checkbox"/> Oaks	<i>Quercus</i> spp.
<input type="checkbox"/> Palo Verde	<i>Cercidium</i> spp.
<input type="checkbox"/> Pines	<i>Pinus</i> spp.
<input type="checkbox"/> Pomegranate	<i>Punica granatum</i>
<input type="checkbox"/> Smoke Tree	<i>Cotinus coggygia</i>
<input type="checkbox"/> Strawberry Tree	<i>Arbutus 'Marina'</i>
<input type="checkbox"/> Sweet Bay	<i>Laurus nobilis</i>
<input type="checkbox"/> Sweet Gum	<i>Liquidambar</i> spp.
<input type="checkbox"/> Western Redbud	<i>Cercis occidentalis</i>

SHRUBS

COMMON NAME	Botanical Name
<input type="checkbox"/> Barberry	<i>Berberis</i> spp.
<input type="checkbox"/> Bluebeard	<i>Caryopteris clandonensis</i>
<input type="checkbox"/> Bottlebrush	<i>Callistemon</i> spp.
<input type="checkbox"/> Boxwood	<i>Buxus</i> spp.
<input type="checkbox"/> Bush Anemone	<i>Carpenteria californica</i>
<input type="checkbox"/> Bush Mallow	<i>Lavatera</i> spp.
<input type="checkbox"/> Bush Morning Glory	<i>Convolvulus cneorum</i>
<input type="checkbox"/> Bush Poppy	<i>Dendromecon</i> spp.
<input type="checkbox"/> Butterfly Bush	<i>Buddleja davidii</i>
<input type="checkbox"/> California Fuchsia	<i>Zauschneria californica</i>
<input type="checkbox"/> California Holly Grape	<i>Mahonia pinnata</i>
<input type="checkbox"/> California Lilac	<i>Ceanothus</i> spp.
<input type="checkbox"/> Coffeeberry	<i>Rhamnus californica</i>
<input type="checkbox"/> Cotoneaster	<i>Cotoneaster</i> spp.
<input type="checkbox"/> Coyote Bush	<i>Baccharis pilularis</i>
<input type="checkbox"/> Dwarf Olive	<i>Olea europaea</i> "Little Ollie"
<input type="checkbox"/> Emu Bush	<i>Eremophila</i> spp.
<input type="checkbox"/> Euryops	<i>Euryops</i> spp.
<input type="checkbox"/> Evergreen Currant	<i>Ribes viburnifolium</i>
<input type="checkbox"/> Firethorn	<i>Pyracantha</i> spp.
<input type="checkbox"/> Flannel Bush	<i>Fremontodendron californicum</i>
<input type="checkbox"/> Flowering Quince	<i>Chaenomeles</i> spp.
<input type="checkbox"/> Forsythia	<i>Forsythia x intermedia</i>
<input type="checkbox"/> Fruity Teucrium	<i>Teucrium cossonii</i>
<input type="checkbox"/> Grevillea	<i>Grevillea</i> spp.
<input type="checkbox"/> Heavenly Bamboo	<i>Nandina domestica</i>
<input type="checkbox"/> Indian Hawthorne	<i>Rhaphiolepis</i> spp.
<input type="checkbox"/> Italian Buckthorn	<i>Rhamnus alaternus</i>
<input type="checkbox"/> Juniper	<i>Juniperus</i> spp.
<input type="checkbox"/> Kangaroo Paw	<i>Anigozanthos</i> spp.
<input type="checkbox"/> Kerria	<i>Kerria japonica</i>
<input type="checkbox"/> Lantana	<i>Lantana camara</i>
<input type="checkbox"/> Manzanita	<i>Arctostaphylos</i> spp.
<input type="checkbox"/> Mountain Mohagany	<i>Cercocarpus betuloides</i>
<input type="checkbox"/> Mugo Pine	<i>Pinus mugo</i>
<input type="checkbox"/> Oleander	<i>Nerium oleander</i>
<input type="checkbox"/> Photinia	<i>Photinia</i> spp.
<input type="checkbox"/> Pineapple Guava	<i>Feijoa sellowiana</i>
<input type="checkbox"/> Rockrose	<i>Cistus</i> spp.
<input type="checkbox"/> Rosemary	<i>Rosmarinus officinalis</i>
<input type="checkbox"/> Russian Olive	<i>Elaeagnus angustifolia</i>
<input type="checkbox"/> Sagebrush	<i>Artemisia</i> spp.
<input type="checkbox"/> Santolina	<i>Santolina</i> spp.

<input type="checkbox"/> Sarcococca	<i>Sarcococca ruscifolia</i>
<input type="checkbox"/> Snowberry	<i>Symphoricarpos</i> spp.
<input type="checkbox"/> Strawberry Tree (dwarf)	<i>Arbutus unedo</i> "Oktoberfest"
<input type="checkbox"/> Sugar Bush	<i>Rhus ovata</i>
<input type="checkbox"/> Sweet Olive	<i>Osmanthus fragrans</i>
<input type="checkbox"/> Texas Ranger	<i>Leucophyllum</i> spp.
<input type="checkbox"/> Toyon	<i>Heteromeles arbutifolia</i>
<input type="checkbox"/> True Myrtle	<i>Myrtus communis</i>
<input type="checkbox"/> Xylosma	<i>Xylosma congestum</i>
<input type="checkbox"/> Yew Pine	<i>Podocarpus</i> spp.

PERENNIALS & BULBS

COMMON NAME	Botanical Name
<input type="checkbox"/> African Daisy	<i>Osteospermum fruticosum</i>
<input type="checkbox"/> Agave	<i>Agave</i> spp.
<input type="checkbox"/> Aloe	<i>Aloe</i> spp.
<input type="checkbox"/> Aptenia	<i>Aptenia cordifolia</i>
<input type="checkbox"/> Bearded Iris	<i>Iris</i>
<input type="checkbox"/> Blue Eyed Grass	<i>Sisyrinchium bellum</i>
<input type="checkbox"/> Cast Iron Plant	<i>Aspidistra elatior</i>
<input type="checkbox"/> Coneflower	<i>Echinacea</i> spp.
<input type="checkbox"/> Coreopsis	<i>Coreopsis</i> spp.
<input type="checkbox"/> Crete Dittany	<i>Origanum dictamnus</i>
<input type="checkbox"/> Daffodill	<i>Narcissus</i>
<input type="checkbox"/> Daylily	<i>Hemerocallis</i> hyb.
<input type="checkbox"/> Dusty Miller	<i>Senecio cineraria</i>
<input type="checkbox"/> Gaura	<i>Gaura lindheimeri</i>
<input type="checkbox"/> Geranium	<i>Pelargonium</i> spp.
<input type="checkbox"/> Hen and Chicks	<i>Echeveria</i> spp.
<input type="checkbox"/> Jerusalem Sage	<i>Phlomis</i> spp.
<input type="checkbox"/> Lamb's Ears	<i>Stachys byzantina</i>
<input type="checkbox"/> Lavender	<i>Lavandula</i> spp.
<input type="checkbox"/> Lily of the Nile	<i>Agapanthus</i> spp.
<input type="checkbox"/> Liriope	<i>Liriope</i> spp.
<input type="checkbox"/> Matillija Poppy	<i>Romneya coulteri</i>
<input type="checkbox"/> Mexican Bush Sage	<i>Salvia leucantha</i>
<input type="checkbox"/> Naked Lady	<i>Amayllis belladonna</i>
<input type="checkbox"/> Penstemon	<i>Penstemon</i> spp.
<input type="checkbox"/> Red Hot Poker	<i>Kniphofia uvaria</i>
<input type="checkbox"/> Red Yucca	<i>Hesperaloe parviflora</i>
<input type="checkbox"/> Russian Sage	<i>Perovskia atriplicifolia</i>
<input type="checkbox"/> Sage	<i>Salvia</i> spp.
<input type="checkbox"/> Santa Barbara Daisy	<i>Erigeron karvinskianus</i>

<input type="checkbox"/> Scabiosa	<i>Scabiosa</i> spp.
<input type="checkbox"/> Society Garlic	<i>Tulbaghia violacea</i>
<input type="checkbox"/> Verbena	<i>Verbena</i> spp.
<input type="checkbox"/> Wood Fern	<i>Dryopteris</i> spp.
<input type="checkbox"/> Yarrow	<i>Achillea</i> spp.

GROUNDCOVERS

COMMON NAME	Botanical Name
<input type="checkbox"/> Bearberry Cotoneaster	<i>Cotoneaster dammeri</i>
<input type="checkbox"/> Blue Fescue	<i>Festuca glauca</i>
<input type="checkbox"/> Buffalograss	<i>Buchloe dactyloides</i>
<input type="checkbox"/> Cape Weed	<i>Arctotheca calendula</i>
<input type="checkbox"/> Evergreen Candytuft	<i>Iberis sempervirens</i>
<input type="checkbox"/> Gazania	<i>Gazania</i> spp.
<input type="checkbox"/> Ground Morning Glory	<i>Convolvulus sabatius</i>
<input type="checkbox"/> Knotweed	<i>Persicaria capitata</i>
<input type="checkbox"/> Myoporum	<i>Myoporum parvifolium</i>
<input type="checkbox"/> Snow in Summer	<i>Cerastium tomentosum</i>
<input type="checkbox"/> Stonecrop	<i>Sedum</i> spp.
<input type="checkbox"/> Sulfur Flower	<i>Eriogonum umbellatum</i>
<input type="checkbox"/> Thyme	<i>Thymus</i> spp.
<input type="checkbox"/> Trailing Lantana	<i>Lantana montevidensis</i>
<input type="checkbox"/> Woolly Yarrow	<i>Achillea tomentosa</i>

VINES

COMMON NAME	Botanical Name
<input type="checkbox"/> Boston Ivy	<i>Parthenocissus tricuspidata</i>
<input type="checkbox"/> Carolina Jessamine	<i>Gelsemium sempervirens</i>
<input type="checkbox"/> Cat's Claw	<i>Macfadyena unguis-cati</i>
<input type="checkbox"/> Honeysuckle	<i>Lonicera</i> spp.
<input type="checkbox"/> Lady Bank's Climbing Rose	<i>Rosa banksiae</i>
<input type="checkbox"/> Potato Vine	<i>Solanum jasminoides</i>
<input type="checkbox"/> Star Jasmine	<i>Trachelospermum jasminoides</i>
<input type="checkbox"/> Wisteria	<i>Wisteria sinensis</i>